

January 24, 2008

The Honorable Dale Sims Chairman Baccalaureate Education System Trust State of Tennessee Treasury Department Suite 1340, Andrew Jackson Building Nashville, TN 37243-0253

Dear Mr. Sims:

Submitted herewith are the results of the actuarial valuation of the Tennessee Baccalaureate Education System Trust prepared as of September 30, 2007 pursuant to T.C.A. § 49-7-818. This report details information concerning the Educational Services Plan (otherwise known as the "Prepaid Plan"). This report does not contain any information relating to the Educational Savings Plan.

We trust this report will be helpful in the formulation of policy with respect to the operation and financing of the program. We appreciate the opportunity to serve the State of Tennessee, and we will be pleased to supplement this report in any way, as you request.

The actuarial valuation summarized in this report has been performed utilizing generally accepted actuarial principles. The Board has prescribed the actuarial assumption regarding tuition inflation and future investment return. We consider all of the assumptions to be reasonable taking into account the experience of the program and future expectations. It is our opinion that the results fully and fairly disclose the actuarial position of the program as of the valuation date.

The information contained in this report was prepared for the State of Tennessee in connection with our actuarial valuation of the plan. It is not intended nor necessarily suitable for other purposes. Further distribution of use of all or part of this report to other parties is expressly prohibited without BPS&M's prior written consent.

Respectfully submitted,

Justy C. Thacker, F.S.A.

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# TENNESSEE BACCALAUREATE EDUCATION SYSTEM TRUST

ACTUARIAL VALUATION AND REPORT

**SEPTEMBER 30, 2007** 

# **CONTENTS**

<b>Executive Summary</b>	1
Summary of Funded Status	1
Development and Discussion of Actuarial Gain or Loss	3
Yearly Comparison of Selected Plan Information	5
Funding and Other Issues	5
Surplus/Deficit Equilibrium	7
Assets	9
Balance Sheet	9
Summary of Operation	9
Comparative Rates of Investment Returns	10
Basis of Valuation	11
Summary of Provisions of the Program	11
Summary of Actuarial Assumptions	13
<b>Actuarial Computations</b>	14
2007 – 2008 Weighted Average Tuition	14
History of Payout Value and Purchase Price	15
Projection of Payout Value and Purchase Price	16
History of Increases – Tuition and Fees	17
History of Increases – Tuition only	18
History of Increases – Fees only	19
Cash Flow Analysis	20
Beneficiary Data	21
Unit Purchases by Year	21
New Contracts by Year	22
Unit Purchases by Age	23

An actuarial valuation of the Tennessee Baccalaureate Education System Trust ("BEST") program was conducted as of September 30, 2007. This valuation only relates to the Educational Services Plan. It does not contain any information relating to the Educational Savings Plan. The purpose of the valuation is to satisfy the requirements of T.C.A. § 49-7-818 which requires, among other things, that an actuary perform an actuarial valuation of the assets and liabilities of the fund at least once a year.

#### **Summary of Funded Status**

Generally, conclusions regarding the funded status of the program should be reached by examining the cost of the program's future obligations. Program obligations include: (i) future tuition obligations and (ii) future operational expenses.

Tuition obligations are funded by amounts received from the purchase of tuition units and investment earnings thereon. The cost of tuition obligations is expected to escalate from current unit values as a result of future tuition inflation.

Operational expenses of the BEST program are funded by (i) the per unit adjustment to the unit purchase price for expenses and (ii) that portion of the market value of assets which is reserved for future expenses (such amounts are collectively referred to as the "Administrative Reserve"). As of September 30, 2007, the Administrative Reserve has been sufficient to cover the annual expenses of the program. The current policy and practice of the program is that future annual operational expenses will be funded by the Administrative Reserve. Accordingly, future program obligations attributable to expenses are not reflected in this valuation report. Periodically, the sufficiency of the Administrative Reserve will be analyzed in a separate expense report.

The following exhibits show the funded status of the BEST program on a present value basis and on a termination basis as of September 30, 2007. There are important differences between the two approaches as discussed below.

#### **Present Value Basis**

Under the present value concept, the current value of the tuition obligations of the program is calculated by determining the fund amount that would be needed on the valuation date to satisfy those obligations. The calculation assumes that program assets earn 6.25% per annum during the period between the valuation date and the date each obligation is assumed to be satisfied. The present value amount is then compared to existing program assets. A surplus or deficit occurs when program assets either exceed or are less than the present value of benefits.

The funded status of the program on a present value basis shown below is based on a comparison of the market value of assets as of September 30, 2007 to the present value of future tuition payments. The market value of assets as of September 30, 2007 is adjusted to reflect reserves held for future operational expenses.

The present value of future payments was calculated and aggregated for each beneficiary as of September 30, 2007 using the investment return, tuition inflation and tuition unit usage assumptions provided in the Summary of Actuarial Assumptions.

Market Value of Assets	\$ 96,255,248
Present Value of Future Payments from the Trust Fund	(92,430,704)
Surplus/(Deficit)	\$ 3,824,544

Funded Percentage 104.14%

#### **Termination Basis**

In addition to the Present Value Basis discussed above, the funded status of the program has also been determined on a termination basis. This approach is of limited value in evaluating the ongoing funding status of the program but is useful as a short-term evaluation measure. The funded status of the program on a termination basis is based on a comparison of the market value of assets as of September 30, 2007 to the payout value of all tuition units outstanding as of September 30, 2007. The program termination payout value is based on the weighted average tuition in effect on September 30, 2007 and does not incorporate the projection of tuition unit values into the future.

Although there is no statutory requirement for the satisfaction of program liabilities on a termination basis, a comparison of the market value of assets to the termination liability as of September 30, 2007 may be helpful in analyzing a scenario whereby existing assets are used to settle the liability for outstanding units.

Market Value of Assets	\$ 96,255,248
Present Value of Accrued Benefits	(87,446,398)
Surplus/(Deficit)	\$ 8,808,850

Funded Percentage 110.07%

#### **Development and Discussion of Actuarial Gain or Loss**

Under the present value approach, the actuarial experience for the past year is such that an actuarial gain occurred during the period. A development of the actuarial experience is presented below.

Present Value Basis Surplus/(Deficit) from Prior Year		(13,998,436)
Expected Interest since September 30, 2006 at 7.5%		(1,049,883)
Expected Surplus/(Deficit) for Current Year (original assumptions)	\$	(15,048,319)
Effect of Change in Actuarial Assumptions		(10,400,000)
Effect of Additional Capital Contribution		25,950,000
Expected Surplus/(Deficit) for Current Year (revised assumptions)	\$	501,681
Actuarial Surplus/(Deficit) for Current Year		3,824,544
Actuarial Gain/(Loss) during Period	\$	3,322,863

In October 2007, the Board decided to change the investment return assumption from 7.5% to 6.25%, and to change the tuition inflation assumption from 6.0% to 7.5%. These changes resulted in a decrease to the funded status of the plan of \$10,400,000.

In 2007, the legislature approved an appropriations bill which allowed for the transfer of capital in the amount of \$25,950,000 to the BEST plan. This resulted in an increase to the funded status of the plan of the same amount.

Actuarial gains and losses occur due to differences between anticipated and actual experience and may over significant periods of observation be important indicators of the accuracy of the actuarial assumptions used in determining surplus levels.

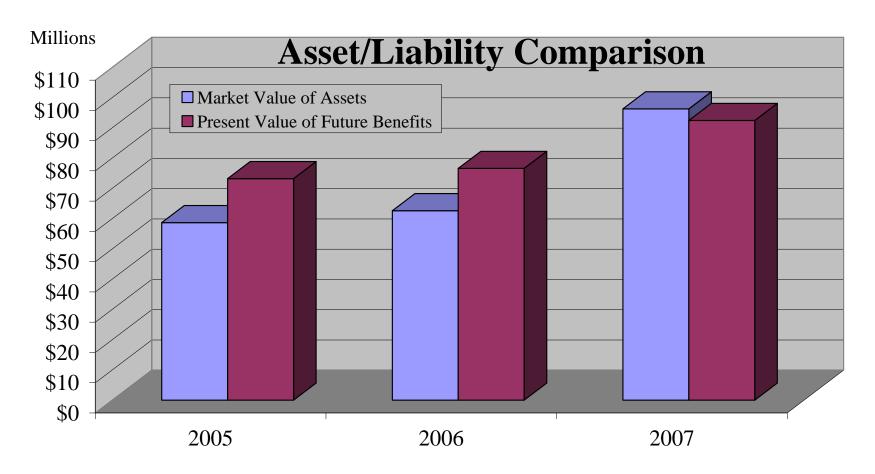
Among the identifiable sources of experience occurring during the year is an actuarial gain attributable to the investment return. The estimated market value dollar weighted investment return for the year of 12.81% was greater than the prior year actuarially assumed return rate of 7.50%. The difference in the rates of return is responsible for an actuarial gain of approximately \$3,855,000.

An actuarial loss is associated with the assumed rate of prior year tuition inflation of 6%. During the year, actual tuition increases were 8.2% resulting in an unexpected increase in liabilities for contracts in effect as of September 30, 2006 and for other contracts purchased prior to the beginning of the current fiscal year. An actuarial loss of approximately \$1,662,000 is attributable to the difference between assumed and actual tuition increase rates. The purchase of new units during the plan year resulted in an actuarial gain of \$648,000.

In August 2004, the Board approved a surcharge on new unit purchases to reduce the likelihood of new units adding to the current deficit. This surcharge resulted in an actuarial gain of \$396,000. Effective August 1, 2007, the Board approved an increase in the surcharge to \$4.56 per unit.

Other sources of actuarial experience gains and losses have not been identified but result from items such as the contract transfers, contract surrenders, operation of the expense reserve account, etc.

	2006	2007
Investments	(1,140,000)	3,855,000
Tuition Inflation	1,232,000	(1,662,000)
Purchase of New Units	933,000	648,000
Surcharge for Actuarial Soundness	430,000	396,000
Other	198,504	85,863
Total	1,653,504	3,322,863



<sup>\*</sup>The Market Value of Assets is adjusted to reflect reserves held for future operational expenses.

#### **Yearly Comparison of Selected Plan Information**

#### Valuation Date

	09/30/2003	09/30/2004	09/30/2005	09/30/2006	09/30/2007*
Total Contracts	8.077	8.372	8.590	9.178	9,413
Units Purchased ^	245,004	180,888	149,663	94,697	92,957
Outstanding Units	1,466,055	1,579,926	1,651,002	1,649,234	1,625,983
Present Value of Benefits	\$54,870,312	\$62,994,775	\$73,221,819	\$76,576,504	\$92,430,704
Market Value of Assets	\$45,506,369	\$52,623,495	\$58,671,177	\$62,588,068	\$96,255,248
Surplus/(Deficit)	(\$9,363,943)	(\$10,371,280)	(\$14,550,642)	(\$13,988,436)	\$3,824,544
Funded Percentage	82.93%	83.54%	80.13%	81.73%	104.14%

<sup>\*</sup> Valuation assumptions changed and additional capital contributed to program

#### **Funding and Other Issues**

**Tuition Inflation and Fees**. The 7.5% tuition inflation assumption utilized for this valuation is based on recommendations from BEST personnel in light of information concerning anticipated tuition and fee increases. This assumption was increased from 6.0% per year in 2007 after the Board conducted a study which indicated that future tuition rates were expected to increase at a rate higher than previously assumed.

**Purchase of Additional Units**. Under the current set of actuarial assumptions, each current unit creates an ongoing deficit on a present value basis. It is expected that future unit purchases will include an actuarial surcharge to eliminate the ongoing deficit associated with that particular unit over the expected time until payout. It is expected that future actuarial gains, actuarial surcharges, and the current surplus (and investment earnings on that surplus) will be sufficient to sustain the plan in the future.

For example, assume that a contract has a current value of \$54.00 and is expected to be used one year in the future. At the assumed rate of tuition inflation of 7.5%, the contract will be worth \$58.05 at the time of payout. In order to generate sufficient funds to satisfy the liability, the plan must have accumulated \$54.64 presently so that earnings of \$3.41 will be generated by an investment return of 6.25% during the year. Although there is no surplus or deficit generated by the contract on a plan termination basis, the single contract is responsible for an ongoing plan deficit of \$0.64 on the present value basis under the current valuation assumptions and the stated assumption of the unit being used one year in the future.

**Surplus/deficit Status** – The surplus position of the program had deteriorated during the prior five years. This deterioration was as result of multiple years of actuarial losses caused by higher than assumed rates of actual tuition inflation and lower than assumed rates of investment return.

To address this issue, the state Legislature passed an appropriations bill which allocated \$25,950,000 to the program. The Board also adopted a more conservative set of valuation assumptions. The use of these assumptions will decrease the likelihood that the program will experience actuarial losses going forward.

<sup>&</sup>lt;sup>^</sup> Represents activity for 12-month period preceding the valuation date

**Valuation Date -** Prior to September 30, 2001, reports were prepared as of the end of the calendar year. The valuation date was changed to September 30 in order to provide up-to-date information for consideration by program officials and the legislature.

**Adjustment for Actuarial Soundness -** Effective August 1, 2004, a surcharge of \$3.71 was included in the purchase price of new units. This was done in attempt to reduce the potential effect of new units adding to the existing plan deficit. This surcharge is subject to annual review by the board. The current value of this surcharge is \$4.56 as of August 1, 2007.

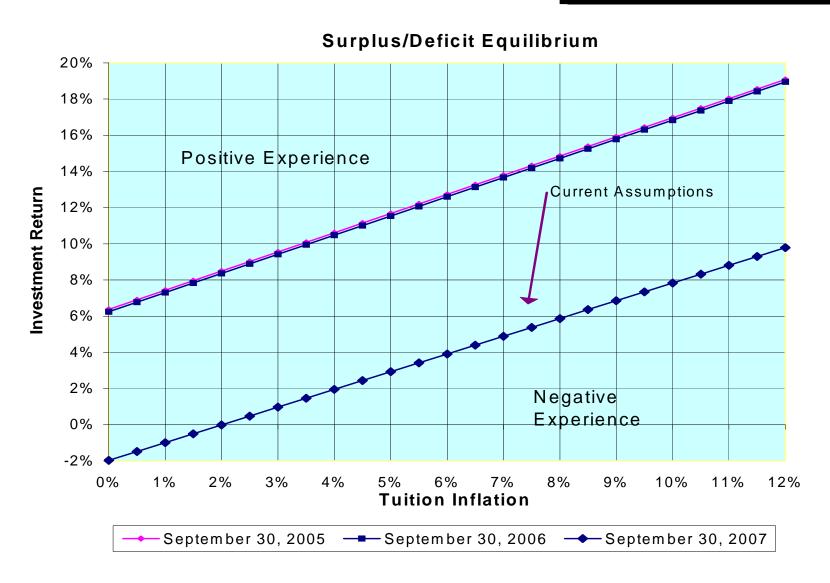
Note that this surcharge on future unit purchases does not affect the current funded status of the plan since this valuation only considers the units and funds currently in the plan as of the valuation date.

#### **Surplus/Deficit Equilibrium**

The graph on the following page may be helpful for planning purposes and for identifying potential risk for the BEST program.

The graph indicates that, for each rate of expected future tuition inflation, there exists a future investment return rate that, if realized, would result in liabilities for existing commitments exactly equaling existing assets. Under each set of these assumptions, the BEST program would be in equilibrium or balanced condition such that neither a surplus nor a deficit would be expected with respect to existing contracts. The surplus/deficit equilibrium line was determined on a present value basis using the September 30, 2007 valuation assumptions.

The equilibrium status of the program would be altered if the actual investment return rate were to exceed the equilibrium rate with the result that an asset surplus would exist after satisfaction of existing commitments. Similarly, a deficiency would occur if actual investment returns were less than the equilibrium return rate. For example, an 8.00% annual tuition rate could be satisfied by an investment return of approximately 5.87%. Higher returns would produce a surplus while lower returns would result in a deficiency. The 6.25% investment return rate assumed in producing this report in combination with an expected tuition inflation rate of 7.5% maintains a slight surplus.



# **ASSETS**

## **Balance Sheet**

A summary balance sheet of the funds held on behalf of the BEST program is shown below.

	<b>September 30, 2006</b>	<b>September 30, 2007</b>
<u>Assets</u>		_
Cash	\$ (55,875)	\$ (6,122)
Short Term Investments	1,173,811	27,611,323
Fixed Income	27,765,598	30,697,397
Equities	34,313,034	39,139,221
Interest Receivable	21,841	(589,711)
Total	\$63,218,409	\$96,852,108
<u>Liabilities</u>		
Reserve for Beneficiaries	\$62,588,068	\$96,255,248
Reserve for Future Expenses	630,341	596,860
Total	\$63,218,409	\$96,852,108

## **Summary of Operation**

A summary of operation of the funds held on behalf of the BEST program during the preceding two plan years is presented below.

	October 1, 2005- September 30, 2006	October 1, 2006- September 30, 2007
Balance as of Beginning of Plan Year	\$59,308,287	\$63,218,409
Receipts		
Contributions	5,610,596	5,147,594
Administrative Fees	252,554	279,226
Transfer from General Fund	0	25,950,000
Transfer from Savings Plan	61,389	61,573
Total Receipts	5,924,539	31,438,393
Investment Earnings	2,948,408	8,108,929
Disbursements		
Tuition Payments	(4,411,861)	(5,121,458)
Refunds	(550,964)	(792,164)
Total Disbursements	(4,962,825)	(5,913,622)
Expenses		
Administrative Cost	(329,076)	(376,999)
Advertising	0	0
Investment Consulting	0	0
Total Expenses	(329,076)	(376,999)
Preliminary Balance as of Valuation Date	\$63,218,409	\$96,852,108
Adjustment for cash and receivables as of Valuation Date	N/A	N/A
Balance as of Valuation Date	\$63,218,409	\$96,852,108

## **ASSETS**

## **Comparative Rates of Investment Returns**

The following plan and comparative market value rates of return for twelve-month periods ending on September 30 using standard industry indices may be of interest in evaluating past BEST program investment returns and future expectations.

	Total Rates of Return for		
	2005	2006	2007
BEST Program			
State Street S & P Index Fund	12.3%	10.8%	16.5%
State Street International Index Fund	N/A	N/A	24.9
Lehman Aggregate Index Fund	N/A	N/A	5.1
Domestic Fixed Income	1.7	3.5	5.1
Cash Equivalents	2.5	4.4	5.1
Total Return	4.2	5.4	12.8
Market Indices			
Standard & Poor's 500 Stocks	12.3%	10.8%	16.4%
Dow Jones Industrial Average	7.2	13.1	21.7
MSCI EAFE Index	25.9	19.2	24.9
LBGC Intermediate Bond Index	1.2	3.3	5.1
90-Day U.S. Treasury Bills	2.5	4.4	5.0

## **BASIS OF VALUATION**

## **Summary of Provisions of the Program**

**Statutory Basis**- The BEST Prepaid Plan is a qualified tuition program under Section 529 of the Internal Revenue Code, and the plan is established pursuant to T.C.A. § 49-7-801 et seq. The requirements for participation and administration of the program are contained in Chapter 1700-5-1 of the Official Compilation of the Rules and Regulations of the State of Tennessee.

**Purpose** - BEST was created by the Tennessee General Assembly in order to assist students and their families in financing a portion of the cost of attending colleges and universities. In that regard, BEST allows parents and other interested persons to purchase tuition units on behalf of an eligible beneficiary. Those units entitle the beneficiary to pay for qualified post secondary education expenses.

**Tuition Units** - Tuition costs are purchased in increments known as tuition units. One tuition unit represents one percent of the average cost, including tuition and mandatory fees, of attending a four-year undergraduate Tennessee public university. Thus, tuition and fee expenses for one academic year would be covered by roughly 100 tuition units.

**Weighted Average Tuition** - Each year, the board determines the weighted average tuition ("WAT"). The WAT is based on the actual tuition and actual fees at each of Tennessee's four-year public universities for the academic year beginning on or after August 1. It is weighted based on enrollment at those schools at the beginning of the prior academic year.

**Purchase Price of Tuition Units -** The purchase price of a tuition unit is equal to the WAT plus a charge to cover administration and an additional charge to ensure the actuarial soundness of the program. Tuition units may be purchased (i) by automatic cash withdrawal from a checking or savings account, (ii) by automatic payroll deduction, (iii) by check, or (iv) by cash. It is the current policy of the BEST program that the purchase price remains constant during an enrollment period from August 1 to December 31. After December 31, the purchase price is increased.

**Payout Value of Tuition Units** – The payout value of a tuition unit is based on the WAT in effect when the beneficiary uses the unit for tuition.

**Usage of Tuition Units** – Tuition units may be applied toward the cost of tuition, mandatory fees and room and board at any accredited two or four-year school or any accredited graduate or professional school. Units may be used at both public and private schools. Units may be used at out-of-state schools as well as at schools located in the State of Tennessee.

**Two-year Limitation on Usage of Tuition Units** - Tuition units may not be used until two full years have passed following their purchase.

**Limit on Number of Tuition Units Purchased -** The total dollar value of tuition units which may be purchased by all persons on behalf of a single beneficiary under all contracts in the BEST Prepaid Plan and the BEST Savings Plan combined may not exceed \$235,000.

**Rollover** – A BEST purchaser may transfer funds from a BEST Prepaid account to another 529 Plan, including the BEST Savings Plan, once every 12 months without incurring federal income tax.

**Time Period for Use** - There is no absolute time period in which the tuition units in a beneficiary's account must be used. However, BEST may terminate an account ten years after the beneficiary attains age 18 if there has been no contact or activity during that ten-year period.

## **BASIS OF VALUATION**

**Transfer of Tuition Units** - Tuition units may be transferred to a new beneficiary provided that the new beneficiary is a member of the family of the original beneficiary as defined under Internal Revenue Section 529.

**Termination of Contract** - A tuition contract can be terminated upon one of the following events: (i) the beneficiary dies or becomes permanently disabled, (ii) the beneficiary is age 18 or older and decides not to attend college, (iii) the beneficiary obtains a higher education degree that is less than a bachelor's degree and decides not to pursue education further, (iv) the beneficiary obtains a bachelor's degree, and (v) the beneficiary's account contains 5 tuition units or less and no tuition units have been purchased for the beneficiary's account for a period of at least 3 consecutive years.

**Refund Upon Termination** - To request a refund, the refund recipient must send BEST written notice that the tuition units will not be used for college. A refund of tuition units for reasons other than death, disability, or scholarship will be subject to certain tax consequences. If the Refund Recipient is the child (Beneficiary) the refund will not be issued until the child reaches age 20.

**Tax Treatment**-Withdrawals for qualified higher educational expenses are exempt from municipal, state and federal taxation. Qualified withdrawals are withdrawals for tuition, books, supplies required for enrollment or attendance at a qualified higher educational institution, and some room and board expenses. Withdrawals for qualified scholarships or due to the beneficiary's attendance at a military academy are subject to federal income tax on the earnings only. Withdrawals for a scholarship refund or due to the beneficiary's attendance at a military academy are not subject to the 10% additional tax. The earnings on tuition units for non-qualified withdrawals are subject to federal income tax and a 10% additional tax.

**Financial Aid Treatment**- Funds saved in prepaid 529 plans may affect the amount of financial aid that the beneficiary will qualify for. For BEST accounts owned by parents, the refund value of the prepaid BEST account must be reported, this amount is added to any other investments, which include, but are not limited to, real estate (not the family home), trust funds, UGMA or UTMA accounts, money market funds, certificates of deposits, stocks, stock options, bonds, other securities, Coverdell Education Savings Accounts, and 529 Savings accounts. Only a percentage of the value of all investments is considered in the calculation of the expected family contribution for aid qualification.

# **BASIS OF VALUATION**

## **Summary of Actuarial Assumptions**

#### **Investment Return**

The valuation was conducted using a 6.25% investment rate of return. This was changed from 7.5% in prior years.

#### **Tuition Increases**

Tuition and fees were assumed to increase at 7.50% per year. This was changed from 6.0% in prior years.

#### **Expenses**

Operational expenses of the BEST program are assumed to be funded by (i) the per unit adjustment to the unit purchase price for expenses and actuarial soundness, (ii) the \$50 initiation fee charged for all new contracts purchased prior to March 29, 2000, and (iii) that portion of the market value of assets which is reserved for future expenses. Therefore, the impact of future expenses is not reflected in this valuation report.

## Age at Enrollment

Age at enrollment is assumed to be (i) age 18, or (ii) for beneficiaries who are age 17 or older as of the beginning of the academic term with units purchased in the preceding year, two full years after the beginning of that academic term.

#### Rate of Usage

Tuition units are used during the two-year period following the assumed enrollment age. Participants with more than one year's worth of units are assumed to use those units over more than one academic year.

#### **Mortality Rates**

None

#### 2007 - 2008 Weighted Average Tuition

The purchase price and payout value of tuition units are based primarily on the weighted average tuition ("WAT"). The WAT for a given enrollment year is based on actual tuition and actual fees at Tennessee's public four-year universities for the academic year. The sum of the tuition and fee amounts for each school is then weighted by the school's enrollment at the beginning of the prior academic year.

The purchase price of one unit is equal to one percent of the WAT plus an amount to cover administrative expenses and the actuarial soundness of the program.

	Fall 2006	2007-08	Total
	Enrollment	Tuition & Fees *	Tuition
Austin Peay (APSU)	7,443	\$5,238	\$38,986,434
East Tennessee (ETSU)	10,361	4,887	50,634,207
Middle Tennessee (MTSU)	19,355	5,278	102,155,690
Tennessee State (TSU)	7,464	4,856	36,245,184
Tennessee Tech (TTU)	7,900	4,980	39,342,000
Univ of Memphis (UoM)	15,946	5,802	92,518,692
UT - Chattanooga (UTC)	7,564	5,062	38,288,968
UT - Knoxville (UTK)	23,499	5,932	139,396,068
UT - Martin (UTM)	5,968	5,005	29,869,840
	105,500		\$567,437,083
Weighted Average Tuition (total tuition	on divided by total enrollment	<del>(</del> )	\$5,379
Tuition Unit Payout Value (1% of WA	AT)		\$53.79
Adjustment for expenses			3.13
Adjustment for actuarial soundness			4.56
Tuition Unit Purchase Price**			\$61.48

<sup>\*</sup> Tuition and fees are based on the actual amounts for the 2007-2008 academic year.

<sup>\*\*</sup> The tuition unit purchase price increased to \$63.63 effective January 1, 2008.

#### **History of Payout Value and Purchase Price**

The following table provides a historical account of the unit payout value and unit purchase price since inception of the BEST program.

Enrollment Year	Unit Payout Value	Adjustment for Expenses	Adjustment for Actuarial Soundness	Unit Purchase Price	Adjustment for Purchases after December 31	Adjusted Unit Purchase Price
1996-1997 *	\$21.64	\$2.11	\$0.00	\$23.75	\$0	\$23.75
1997-1998	21.64	2.11	0.00	23.75	0	23.75
1998-1999	25.00	1.75	0.00	26.75	1.25	28.00
1999-2000	27.08	1.92	0.00	29.00	1.25	30.25
2000-2001	29.58	1.92	0.00	31.50	1.50	33.00
2001-2002	33.51	0.99	0.00	34.50	2.35	36.85
2002-2003	35.98	1.02	0.00	37.00	1.40	38.40
2003-2004	40.70	1.30	0.00	42.00	1.60	43.60
2004-2005	43.15	2.10	3.71	48.96	1.84	50.80
2005-2006	47.71	2.28	4.07	54.06	2.03	56.09
2006-2007 **	49.72	2.98	4.24	56.94	2.14	59.08
2007-2008	53.79	3.13	4.56	61.48	2.15	63.63

<sup>\*</sup> The enrollment period for 1996-97 was from June 9, 1997 to August 5, 1997. This was the initial enrollment period for the program, and it was decided to use the same purchase price as that to be used for the 1997-98 enrollment year.

<sup>\*\*</sup> Number revised from prior report.

#### **Projection of Payout Value and Purchase Price**

The following table shows a projection of the tuition unit purchase price and payout value. The projected payout value is equal to the projected weighted average tuition using a tuition inflation rate of 7.5%. The projected adjustment for expenses and actuarial soundness is based on (i) initial values of \$3.13 for expenses and \$4.56 for actuarial soundness for the enrollment year beginning August 1, 2007 and (ii) and inflation rate for expenses of 3.75% and inflation rate for actuarial soundness of 7.5%. The actual values for the enrollment year beginning August 1, 2007 are shown.

			Projected	
		Projected	Adjustment	
<b>Enrollment Year</b>	<b>Projected Unit</b>	Adjustment	for Actuarial	<b>Projected Unit</b>
Beginning	Payout Value	for Expenses**	Soundness**	Price
August 1, 2007 *	\$53.79	\$3.13	\$4.56	\$61.48
August 1, 2008	57.82	3.25	4.90	65.97
August 1, 2009	62.16	3.37	5.27	70.80
August 1, 2010	66.82	3.50	5.67	75.99
August 1, 2011	71.83	3.63	6.10	81.56
August 1, 2012	77.22	3.77	6.56	87.55
August 1, 2013	83.01	3.91	7.05	93.97
August 1, 2014	89.24	4.06	7.58	100.88
August 1, 2015	95.93	4.21	8.15	108.29
August 1, 2016	103.12	4.37	8.76	116.25
August 1, 2017	110.85	4.53	9.42	124.80
August 1, 2018	119.16	4.70	10.13	133.99
August 1, 2019	128.10	4.88	10.89	143.87
August 1, 2020	137.71	5.06	11.71	154.48
August 1, 2021	148.04	5.25	12.59	165.88
August 1, 2022	159.14	5.45	13.53	178.12
August 1, 2023	171.08	5.65	14.54	191.27
August 1, 2024	183.91	5.86	15.63	205.40
August 1, 2025	197.70	6.08	16.80	220.58
August 1, 2026	212.53	6.31	18.06	236.90
-				

<sup>\*</sup>actual values

<sup>\*\*</sup> subject to annual review

## **History of Increases – Tuition and Fees**

The table below and the tables on the succeeding pages show the history of increases in (i) tuition and fees combined, (ii) tuition only and (iii) fees only, respectively. These tables may be helpful in analyzing trends in tuition and fee inflation.

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
APSU	2,566	2,813	3,190	3,454	4,004	4,224	4,635	4,837	5,238
Increase	4.65%	9.63%	13.40%	8.28%	15.92%	5.49%	9.73%	4.36%	8.29%
ETSU	2,532	2,759	3,119	3,311	3,839	4,059	4,487	4,637	4,887
Increase	6.21%	8.97%	13.05%	6.16%	15.95%	5.73%	10.54%	3.34%	5.39%
MTSU	2,500	2,791	3,178	3,426	3,990	4,210	4,576	4,766	5,278
Increase	5.22%	11.64%	13.87%	7.80%	16.46%	5.51%	8.69%	4.15%	10.74%
TSU	2,422	2,651	2,987	3,252	3,788	4,008	4,384	4,534	4,856
Increase	5.86%	9.45%	12.67%	8.87%	16.48%	5.81%	9.38%	3.42%	7.10%
TTU	2,420	2,667	3,066	3,266	3,750	3,970	4,396	4,562	4,980
Increase	4.94%	10.21%	14.96%	6.52%	14.82%	5.87%	10.73%	3.78%	9.16%
UoM	2,818	3,087	3,472	3,704	4,234	4,480	5,084	5,256	5,802
Increase	7.15%	9.55%	12.47%	6.68%	14.31%	5.81%	13.48%	3.38%	10.39%
UTC	2,660	2,834	3,236	3,550	3,852	4,093	4,500	4,688	5,062
Increase	7.95%	6.54%	14.18%	9.70%	8.51%	6.26%	9.94%	4.18%	7.98%
UTK	3,104	3,362	3,784	4,056	4,450	4,749	5,290	5,576	5,932
Increase	13.12%	8.31%	12.55%	7.19%	9.71%	6.72%	11.39%	5.41%	6.38%
UTM	2,656	2,830	3,280	3,515	3,847	4,134	4,493	4,665	5,005
Increase	13.41%	6.55%	15.90%	7.16%	9.45%	7.46%	8.68%	3.83%	7.29%
<u>Averages</u>									
Weighted Avg <sup>1</sup>	2,708	2,958	3,351	3,598	4,070	4,315	4,771	4,972	5,379
Increase	8.32%	9.23%	13.29%	7.37%	13.12%	6.02%	10.57%	4.21%	8.19%

<sup>&</sup>lt;sup>1</sup> Weighted Averages shown are derived using Fall enrollment figures from the preceding year.

## <u>History of Increases – Tuition only</u>

-	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
APSU	2,020	2,222	2,556	2,748	3,132	3,352	3,678	3,828	4,058
Increase	5.98%	10.00%	15.03%	7.51%	13.97%	7.02%	9.73%	4.08%	6.01%
ETSU	2,020	2,222	2,556	2,748	3,132	3,352	3,678	3,828	4,058
Increase	5.98%	10.00%	15.03%	7.51%	13.97%	7.02%	9.73%	4.08%	6.01%
MTSU	2,020	2,222	2,556	2,748	3,132	3,352	3,678	3,828	4,058
Increase	5.98%	10.00%	15.03%	7.51%	13.97%	7.02%	9.73%	4.08%	6.01%
TSU	2,020	2,222	2,556	2,748	3,132	3,352	3,678	3,828	4,058
Increase	5.98%	10.00%	15.03%	7.51%	13.97%	7.02%	9.73%	4.08%	6.01%
TTU	2,020	2,222	2,556	2,748	3,132	3,352	3,678	3,828	4,058
Increase	5.98%	10.00%	15.03%	7.51%	13.97%	7.02%	9.73%	4.08%	6.01%
UoM	2,258	2,484	2,858	3,072	3,502	3,748	4,216	4,388	4,652
Increase	8.04%	10.01%	15.06%	7.49%	14.00%	7.02%	12.49%	4.08%	6.02%
UTC	2,172	2,346	2,698	2,800	3,052	3,293	3,600	3,748	3,972
Increase	9.04%	8.01%	15.00%	3.78%	9.00%	7.90%	9.32%	4.11%	5.98%
UTK	2,604	2,812	3,234	3,476	3,788	4,087	4,618	4,830	5,120
Increase	15.02%	7.99%	15.01%	7.48%	8.98%	7.89%	12.99%	4.59%	6.00%
UTM	2,172	2,346	2,698	2,900	3,162	3,412	3,744	3,916	4,150
Increase	9.04%	8.01%	15.00%	7.49%	9.03%	7.91%	9.73%	4.59%	5.98%
<u>Averages</u>									
Weighted Average	2,215	2,420	2,783	2,983	3,337	3,578	3,968	4,137	4,383
Increase	9.17%	9.26%	15.00%	7.19%	11.87%	7.22%	10.90%	4.26%	5.95%

<sup>\*</sup> The Weighted Averages shown are derived using Fall enrollment figures from the preceding year.

## <u>History of Increases – Fees only</u>

_	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
APSU	546	591	634	706	872	872	957	1,009	1,180
Increase	0.00%	8.24%	7.28%	11.36%	23.51%	0.00%	9.75%	5.43%	16.95%
ETSU	512	537	563	563	707	707	809	809	829
Increase	7.11%	4.88%	4.84%	0.00%	25.58%	0.00%	14.43%	0.00%	2.47%
MTSU	480	569	622	678	858	858	898	938	1,220
Increase	2.13%	18.54%	9.31%	9.00%	26.55%	0.00%	4.66%	4.45%	30.06%
TSU	402	429	431	504	656	656	706	706	798
Increase	5.24%	6.72%	0.47%	16.94%	30.16%	0.00%	7.62%	0.00%	13.03%
TTU	400	445	510	518	618	618	718	734	922
Increase	0.00%	11.25%	14.61%	1.57%	19.31%	0.00%	16.18%	2.23%	25.61%
UoM	560	603	614	632	732	732	868	868	1,150
Increase	3.70%	7.68%	1.82%	2.93%	15.82%	0.00%	18.58%	0.00%	32.49%
UTC	488	488	538	750	800	800	900	940	1,090
Increase	3.39%	0.00%	10.25%	39.41%	6.67%	0.00%	12.50%	4.44%	15.96%
UTK	500	550	550	580	662	662	672	746	812
Increase	4.17%	10.00%	0.00%	5.45%	14.14%	0.00%	1.51%	11.01%	8.85%
UTM	484	484	582	615	685	722	<b>749</b>	<b>749</b>	855
Increase	38.29%	0.00%	20.25%	5.67%	11.38%	5.40%	3.74%	0.00%	14.15%
<u>Averages</u>									
Weighted Average	494	538	568	607	733	736	803	835	995
Increase	5.11%	8.91%	5.58%	6.87%	20.76%	0.37%	9.20%	3.93%	19.17%

<sup>\*</sup> Weighted Averages shown are derived using Fall enrollment figures from the preceding year.

## **Cash Flow Analysis**

The following exhibit was generated from a cash flow model which considers only those tuition units outstanding as of September 30, 2007.

The model utilizes the valuation assumptions in determining future tuition payments. Based on the valuation assumptions, all tuition units outstanding as of September 30, 2007 are assumed to be paid out on or before September 30, 2027.

Plan Year Ending	Market Value BOY	Tuition Payments	Investment Income	Market Value EOY	
2008	\$96,852,108	\$19,318,732	\$4,845,836	\$82,379,212	
2009	82,379,212	15,882,171	4,156,065	70,653,106	
2010	70,653,106	7,001,827	3,978,205	67,629,484	
2011	67,629,484	7,785,131	3,740,272	63,584,625	
2012	63,584,625	8,524,641	3,441,249	58,501,233	
2013	58,501,233	8,530,416	3,123,176	53,093,993	
2014	53,093,993	8,538,658	2,784,708	47,340,043	
2015	47,340,043	8,139,759	2,450,018	41,650,302	
2016	41,650,302	7,944,731	2,106,598	35,812,169	
2017	35,812,169	7,328,326	1,780,240	30,264,083	
2018	30,264,083	5,944,442	1,519,978	25,839,619	
2019	25,839,619	4,678,817	1,322,550	22,483,352	
2020	22,483,352	3,759,991	1,170,210	19,893,571	
2021	19,893,571	3,456,659	1,027,307	17,464,219	
2022	17,464,219	2,481,298	936,433	15,919,354	
2023	15,919,354	1,290,307	914,315	15,543,362	
2024	15,543,362	1,347,597	887,235	15,083,000	
2025	15,083,000	937,021	884,124	15,030,103	
2026	15,030,103	139,774	930,646	15,820,975	
2027	15,820,975	0	988,811	16,809,786	

# **BENEFICIARY DATA**

## **Unit Purchases by Year**

The following exhibit summarizes unit purchase activity by enrollment year. The cumulative units at the end of the enrollment year equal cumulative units at the beginning of the year plus purchases and transfers less withdrawals.

Enrollment Year*	Cumulative Units at Beginning of Enrollment year	Purchases ^	Withdrawals^	Cumulative Units at End of Enrollment year
1996-1997	0	36,494	0	36,494
1997-1998	36,494	344,850	102	381,242
1998-1999	381,242	266,774	368	647,648
1999-2000	647,648	196,726	7,376	836,998
2000-2001	836,998	221,167	13,893	1,044,272
2001-2002	1,044,272	240,045	31,356	1,252,961
2002-2003	1,252,961	245,004	38,092	1,459,873
2003-2004	1,459,873	184,210	63,301	1,580,782
2004-2005	1,580,782	160,632	94,773	1,646,641
2005-2006	1,646,641	94,491	82,115	1,659,017
2006-2007	1,659,017	97,791	114,499	1,642,309
2007-2008 **	1,642,309	6,180	22,506	1,625,983

<sup>\*</sup>Enrollment year is defined as August 1 through July 31.

<sup>\*\*</sup>Represents activity for the 2007-2008 enrollment year through September 30, 2007.

<sup>^</sup> Revised from prior reports.

# BENEFICIARY DATA

## **New Contracts by Year**

The following exhibit summarizes contract purchase activity by enrollment year.

	Cumulative		
	Contracts at	Net Change in	Cumulative
	Beginning of	Number of	Contracts at End of
Enrollment Year*	<b>Enrollment year</b>	Contracts	Enrollment year ^
1996-1997	0	675	675
1997-1998	675	2,685	3,360
		,	,
1998-1999	3,360	1,581	4,941
1999-2000	4,941	1,119	6,060
2000-2001	6,060	849	6,909
2001-2002	6,909	808	7,717
2002-2003	7,717	566	8,283
2003-2004	8,283	398	8,681
2004-2005	8,681	298	8,979
2005-2006	8,979	199	9,178
2003-2000	0,777	1//	7,170
2006-2007	9,178	224	9,402
2007-2008 **	9,402	11	9,413

<sup>\*</sup>Enrollment year is defined as August 1 through July 31.

<sup>\*\*</sup>Represents activity for the 2007-2008 enrollment year through September 30, 2007.

<sup>^</sup> Revised from prior reports.

# BENEFICIARY DATA

## **Unit Purchases by Age**

The following exhibit may be helpful in analyzing the demographic composition of BEST beneficiaries. A breakdown of unit purchases for last four enrollment years is shown, along with a breakdown of units outstanding as of September 30, 2007.

	2003-04		2004-05		200:	5-06	200	6-07	Total at 9/30/2007	
Age Last Birthday at End of Enrollment	Units	Percent of Total	Units	Percent of Total	Units Purchases	Percent of	Units Purchases	Percent of Total	Units	Percent of
Year	Purchases	Total	Purchases	Total	Purchases	Total	Purchases	Total	Outstanding	Total
0	5,831	3.17%	2,320	1.44%	1,238	1.31%	702	0.72%	707	0.04%
1	6,315	3.43%	3,055	1.90%	3,861	4.09%	4,519	4.62%	5,095	0.31%
2	8,037	4.36%	3,514	2.19%	1,654	1.75%	2,671	2.73%	7,877	0.48%
3	2,870	1.56%	4,813	3.00%	2,318	2.45%	1,734	1.77%	8,108	0.50%
4	8,229	4.47%	4,240	2.64%	2,750	2.91%	2,250	2.30%	16,761	1.03%
5	9,149	4.97%	5,665	3.53%	4,546	4.81%	3,201	3.27%	25,101	1.54%
6	8,445	4.58%	6,493	4.04%	4,660	4.93%	3,184	3.26%	29,352	1.81%
7	7,732	4.20%	8,838	5.50%	4,208	4.45%	4,477	4.58%	39,265	2.41%
8	7,902	4.29%	6,432	4.00%	6,382	6.75%	5,967	6.10%	53,626	3.30%
9	9,240	5.02%	7,396	4.60%	4,748	5.02%	4,461	4.56%	71,066	4.37%
10	10,008	5.43%	8,986	5.59%	7,142	7.56%	5,846	5.98%	82,818	5.09%
11	10,071	5.47%	8,644	5.38%	5,556	5.88%	6,818	6.97%	91,212	5.61%
12	10,431	5.66%	11,432	7.12%	4,620	4.89%	4,600	4.70%	102,863	6.33%
13	10,339	5.61%	8,388	5.22%	4,901	5.19%	6,536	6.68%	110,469	6.79%
14	13,348	7.25%	9,301	5.79%	5,496	5.82%	5,305	5.43%	118,678	7.30%
15	12,380	6.72%	13,924	8.67%	6,734	7.13%	5,280	5.40%	116,509	7.17%
16	14,014	7.61%	10,633	6.62%	5,493	5.81%	5,950	6.08%	112,642	6.93%
17	14,311	7.77%	11,267	7.01%	5,701	6.03%	6,290	6.43%	132,555	8.15%
18	7,576	4.11%	9,777	6.09%	5,233	5.54%	4,735	4.84%	142,129	8.74%
19	3,643	1.98%	4,325	2.69%	2,185	2.31%	4,544	4.65%	105,153	6.47%
over 20	4,339	2.36%	11,191	6.97%	5,067	5.36%	8,718	8.92%	253,998	15.62%
Total	184,210	100.00%	160,632	100.00%	94,491	100.00%	97,791	100.00%	1,625,983	100.00%